This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. canceled.

2. canceled.

3. (previously presented) A multiple station apparatus for automated preparation of a pizza, the apparatus comprising:

a. at least one dough mixer that prepares individual and pre-determined portions of dough from flour and other component ingredients;

b. at least one shaping device that shapes the fresh dough to a flattened pizza base of pre-determined dimension;

c. at least one metering and dispensing device that apportions and applies a pre-determined amount of at least one topping to the pizza base to form a pizza;

d. at least one oven that cooks the pizza; and

e. a transport system that transports the dough portion, the flattened pizza base and the pizza through the multiple station apparatus.

4. (previously presented) The apparatus of claim 3, wherein the at least one dough mixer includes:

a. a closed housing with horizontal housing axis, the housing having two inner, essentially circular, juxtaposed, coaxial and separated surfaces between which two casing surface sections extend which run in an arc along the same casing line and change in the upper and lower region into a flat surface section, the flat surface sections each at least partially formed by the surface of a sliding blade in its closed position; and

b. a kneading element operating with a rotational axis coaxial or parallel to the housing axis.

5. (previously presented) The apparatus of claim 4, wherein the dough mixer further includes a cross piece to the casing surface sections and to the level surface sections, located along a perimeter of each circular surface, the cross piece having a large rounding-off radius.

6. (previously presented) The apparatus of claim 4, wherein one circular surface of the closed housing, across from a circular surface from which a drive shaft extends for the kneading element, has a slight conical or domed form projecting into the housing, coaxially to the rotational axis of the kneading element.

7. (previously presented) The apparatus of claim 4, wherein one circular surface of the closed housing, across from a circular surface from which a drive shaft extends for the kneading element, has a distinctive conical, nose cone-shaped, or cylindrical form with hemispherical end that is coaxial or parallel to the rotational axis of the kneading element.

8. (previously presented) The apparatus of claim 4, wherein one circular surface of the closed housing, across from a circular surface from which a drive shaft extends for the kneading element, has one or more holes for supply of liquid ingredients into the housing, the one or more holes located in a central region of the circular surface, within a circular track defined by ends of the kneading element.

9. (previously presented) The apparatus of claim 4, wherein the housing of the dough mixer and the kneading element are occasionally subjected to moving hot air introduced through a hole or nozzle and which exits through a discharge opening in the housing, the hot air generated by a drive motor of the dough mixer or from a pneumatic

system and heated prior to entry, the hot air sterilizing the housing and the kneading element, loosening any bits of dough or leftover ingredients and transporting same by means of the exiting stream of air.

10. (previously presented) The apparatus of claim 4, wherein the kneading element of the dough mixer includes:

a. an arm extending radially from an end of a drive shaft of the kneading element;

b. two fixed pins, one pin being attached to each free end of the arm, the pins having a longitudinal axis parallel to the rotational axis of the kneading element; and

c. two cylindrical sleeves, one sleeve attached to each fixed pin by an axially recessed hole allowing the sleeve to freely turn relative to the fixed pin, wherein terminal regions of each sleeve are rounded-off, round-ended, or nose cone-shaped.

11. (previously presented) The apparatus of claim 10, wherein the arm is fastened off-center to the drive shaft such that the two fixed pins turn with varying radius about the rotational axis of the kneading element.

12. (previously presented) The apparatus of claim 4, wherein the kneading element of the dough mixer includes:

a. a plurality of arms, each extending radially along a drive shaft of the kneading element at some distance from an end of the drive shaft;

b. a fixed pin attached to each free end of each of the plurality or arms, each fixed pin having a longitudinal axis parallel to, and not equidistant from, the rotational axis of the kneading element; and

c. a cylindrical, freely turning sleeve attached to each fixed pin.

13. (previously presented) The apparatus of claim 12, wherein an inner housing wall, corresponding to the one circular surface across from the circular surface from which the drive shaft extends for the kneading element, is replaceable with a housing wall that changes the distance between the two circular surfaces, and depending on this change in distance, the sleeves are replaced by sleeves with appropriate longitudinal extension.

14. (previously presented) The apparatus of claim 4, wherein the dough mixer further includes a metering device having a cylindrical container with vertical longitudinal axis, the cylindrical container including:

a. a dust storage area in an upper region;

b. a metering mechanism in a lower region;

c. at least one dust stirring element operating in the upper region;

d. at least one metering stirring element operating in the lower region;

e. a distribution cone in the lower region;

f. a metering disk with a plurality of metering holes equally spaced from one another, and equally spaced from a rotational axis of the metering disk, the metering holes being located along a rim of the metering disk; and

g. a shaft that rotates coaxially with the vertical longitudinal axis of the cylindrical container to activate the dust stirring elements, the metering stirring elements, the distribution cone, and the metering disk to provide pre-determined portions of dust to the dough mixer.

15. (previously presented) The apparatus of claim 14, wherein the cylindrical container further includes an annular, funnel-like partition, through a central opening of

which an upper part of the distribution cone extends to form an annular duct for the dust to enter the metering region.

16. (previously presented) The apparatus of claim 15, wherein at least one dust stirring element operates, extending radially from the distribution cone near an upper surface of the partition.

17. (previously presented) The apparatus of claim 14, wherein the metering disk is positioned between a fixed, level bottom plate of the cylindrical container and an annular, fixed sieve, and the bottom plate includes an outflow opening within the track of the metering holes of the rotating metering disk.

18. (previously presented) The apparatus of claim 17, wherein the sieve includes ducts through which the dust passes and wherein at least one metering stirring element, extending radially from the distribution cone, passes close to the sieve during rotation of the cone.

19. (previously presented) The apparatus of claim 14, wherein the dough mixer and the metering device can function independently of each other, and the dough mixer can function with a known metering device or the metering device can function with a known kneading device.

20. (previously presented) The apparatus of claim 3, wherein the dough mixer includes:

a. means for charging a mixing region with flour-like or dust-like ingredients;

b. means for homogenizing and aerating the flour-like or dust-like ingredients;

c. means for introducing liquid ingredients to the flour-like or dust-like ingredients;

d. means for preparing the dough; and

e. means for discharging the dough from the mixing region.

21. (previously presented) The apparatus of claim 3, wherein the at least one shaping device includes:

a. a preformer that receives a dough ball and presses the dough ball into a dough disc;

b. a dough shaping press that receives a dough disc and presses the dough disc into a pizza base; and

c. a dough punching device that receives the pizza base and dimples the pizza base for uniform and expedited cooking.

22. (previously presented) The apparatus of claim 21, wherein the preformer includes:

a. a funnel shaped housing;

b. a disc press; and

c. a lower press plate, wherein the dough ball falls by gravity into the funnel housing, comes to rest on the lower press plate, and is pressed into the dough disc by the disc press.

23. (previously presented) The apparatus of claim 22, wherein the lower press plate is pre-heated to warm the dough ball and the dough disc to expedite a later, uniform cooking of the dough.

24. (previously presented) The apparatus of claim 22, wherein the disc press includes a disc plate shaped as an inverted cup which, when lowered to contact the dough ball, shapes the dough ball into a dough disc against the lower press plate.

25. (previously presented) The apparatus of 24, wherein the disc plate is pre-heated to warm the dough disc to expedite a later, uniform cooking of the dough.

26. (previously presented) The apparatus of claim 22, wherein the lower press plate of the preformer acts as a lower press plate of the dough shaping press.

27. (previously presented) The apparatus of claim 21, wherein the dough shaping press includes:

a. an upper press plate; and

b. a lower press plate, wherein the lower press plate moves vertically with the dough disc to form the pizza base by pressing the dough disc against the upper press plate.

28. (previously presented) The apparatus of claim 27, wherein the upper press plate is stationary, being fixedly connected to the apparatus.

29. (previously presented) The apparatus of claim 27, wherein the lower press plate is horizontally slidable to receive the dough disc from the preformer and to move laterally to a position under the upper press plate for pizza base formation.

30. (previously presented) The apparatus of claim 21, wherein the dough punching device includes:

a. a housing slidably connected to the apparatus;

b. a toothed punching plate fixedly connected to the housing; and

c. a lower press plate, wherein the lower press plate raises the pizza base to dimple the pizza base against the toothed punching plate, the dimples to facilitate a later uniform and expedited cooking of the pizza base.

31. (previously presented) The apparatus of claim 30, wherein the housing horizontally slides to a position above the lower press plate prior to the lower press plate raising the pizza base to dimple the pizza base against the toothed punching plate.

32. (previously presented) The apparatus of claim 30, wherein the lower press plate is horizontally slidable and also receives the dough ball at the preformer, supports the dough ball during pressing into a dough disc, moves horizontally to a position at the dough shaping press for pizza base formation, and supports the dough disc during pizza base pressing at the dough shaping press.

33. (previously presented) The apparatus of claim 32, wherein the lower press plate is pre-heated to warm the dough ball, the dough disc, and the pizza base to expedite a later, uniform cooking of the dough.

34. (previously presented) The apparatus of claim 30, wherein the lower press plate is tilted, after pizza base dimpling, to transfer the dimpled pizza base to a conveying system for continued pizza preparation.

35. (previously presented) The apparatus of claim 3, wherein the at least one shaping device includes:

a. means for pressing a dough ball into a dough disc;

b. means for pressing a dough disc into a pizza base; and

c. means for dimpling the pizza base to facilitate a uniform and expedited cooking of the pizza base.

36. (previously presented) The apparatus of claim 3, wherein the at least one shaping device includes:

a. means for raising a lower press plate into contact with an open-bottomed housing;

b. means for receiving a dough ball onto the lower press plate;

c. means for lowering a disc press to form the dough disc by pressing the dough disc against the lower press plate;

d. means for lowering the lower press plate away from the housing while the lower press plate supports the dough disc;

e. means for horizontally moving the lower press plate to a position under an upper press plate;

f. means for raising the lower press plate to form the pizza base by pressing against the upper press plate;

g. means for lowering the lower press plate away from the upper press plate, the lower press plate supporting the pizza base;

h. means for horizontally sliding a toothed punching plate to a position above the lower press plate; and

i. means for raising the lower press plate to dimple the pizza base by pressing the pizza base against the toothed punching plate.

37. (previously presented) The apparatus of claim 3, wherein at least one metering and dispensing device apportions liquid or cream-like components to the pizza base, wherein the metering and dispensing device distributes the liquid or cream-like component by dropping it on the pizza base thereunder, in a spiral, by rotating and shifting radially a dispensing feed tube over the pizza base.

38. (previously presented) The apparatus of claim 37, wherein the pizza base is conveyed to and from the metering and dispensing device by a traditional conveyor belt or conveyor chain which stops and holds stationary the pizza base during distribution of the liquid or cream-like component, thereby allowing heat impact onto the pizza base during conveying or garnishing.

39. (previously presented) The apparatus of claim 3, wherein at least one metering and dispensing device apportions liquid or cream-like components to the pizza base, the metering and dispensing device including:

a. a base plate with a central hole under which the pizza base is located, the hole centered about a perpendicular axis;

b. a bushing, rotatably connected to the base plate, having a central bore centered about the perpendicular axis;

c. a spindle fixedly connected to the bushing;

d. a carriage movably connected to the spindle; and

e. a tube for feeding the liquid or cream-like components, the tube being fixedly connected to the carriage, wherein during rotation of the bushing about the perpendicular axis, the carriage moves along the spindle radially relative to the perpendicular axis, and liquid or cream-like components are dispensed from the tube in a spiral on the pizza base.

40. (previously presented) The apparatus of claim 39, wherein the pizza base is conveyed to and from the metering and dispensing device by a traditional conveyor belt or conveyor chain which stops and holds stationary the pizza base during dispensing of the liquid or cream-like components, thereby allowing heat impact onto the pizza base during conveying or garnishing.

41. (previously presented) The apparatus of claim 39, wherein the spindle is threaded, the spindle rotating about its longitudinal axis to move the carriage therealong.

42. (previously presented) The apparatus of claim 41, wherein the threaded spindle is rotated by an annular, toothed gear mounted to the spindle, which toothed gear engages in a gear ring, the gear ring communicating with a stationary structure of the metering and dispensing device during bushing rotation to turn the spindle.

43. (previously presented) The apparatus of claim 39, wherein the spindle is positioned horizontally relative to the base plate and the carriage passes through the perpendicular axis during movement along the spindle.

44. (previously presented) The apparatus of claim 39, wherein the liquid or cream-like components are dispensed uniformly on the pizza base such that a time unit of dispensed volume of component remains constant, the uniform dispensing being achieved by altering the rotational speed of the bushing accordingly in relation to the changing radius of the spiral of component on the pizza base.

45. (previously presented) The apparatus of claim 39, wherein the liquid or cream-like components are dispensed uniformly on the pizza base such that the rotational speed of the bushing remains constant and the time unit of dispensed volume of component changes in proportion to the changing radius of the spiral of component on the pizza base, wherein a reduction of the radius causes a decrease in a time unit of dispensed volume.

46. (previously presented) The apparatus of claim 3, wherein at least one metering and dispensing device apportions liquid or cream-like components to the pizza base, the metering and dispensing device including:

a. means for positioning the pizza base for garnishing;

b. means for rotating a dispenser about an axis perpendicular to the pizza base;

c. means for moving the dispenser radially relative to the perpendicular axis and parallel relative to the pizza base; and

d. means for dispensing the liquid or cream-like component during steps (b) and (c), whereby the liquid or cream-like component is placed on the pizza base in a spiral.

47. (previously presented) The apparatus of claim 3, wherein the at least one oven includes:

a. sources of infrared rays in the far-infrared, the visible-infrared, and the near-infrared, range located in an upper portion of the oven;

b. sources of infrared rays in the far-infrared range located in a lower portion of the oven, the infrared rays in the lower portion of the oven acting through openings in a plate supporting the pizza; and

c. reflectors combined with the sources of infrared rays to cook the pizza.

48. (previously presented) The apparatus of claim 47, further including an induction unit in the lower portion of the oven acting on a metal structure of a plate supporting the pizza to assist in the cooking of the pizza.

49. (previously presented) The apparatus of claim 47, wherein the oven further includes a heat retaining housing to assist in the cooking of the pizza.

50. (previously presented) The apparatus of claim 47, wherein the upper portion of the oven can move vertically such that in a lowered cooking position an enclosed space is created that shields radiation acting inside the enclosed space.

51. (previously presented) The apparatus of claim 47, wherein the sources of infrared rays are mounted such that the sources can move vertically with or without the combined reflectors.

52. (previously presented) The apparatus of claim 47, further including a microwave-emitting megatron located in the upper portion of the oven to operate in conjunction with sources of infrared rays.

53. (previously presented) The apparatus of claim 3, wherein the at least one oven includes:

a. means for performing an initial heating cycle;

b. means for performing an intermediate heating cycle; and

c. means for performing a final heating cycle, wherein each cycle has a different duration, and each interval between cycles has a same or different duration.

54. (previously presented) The apparatus of claim 3, wherein the transport system includes:

a. a lower press plate that transports the dough from the mixing device to and through the at least one shaping device;

b. a conveying system that transports the pizza base from the shaping device to and through the at least one oven; and

c. a cutting device that transports the pizza from an oven outlet to a pizza packaging or delivering position.

55. (previously presented) The apparatus of claim 3, further comprising a pizza cutting and transfer device, the pizza cutting and transfer device including:

a. a plate;

b. at least one blade connected to the plate;

c. a vertical sheet connected to the plate, wherein the plate moves vertically relative to the pizza allowing the at least one blade to cut the pizza, then the plate moves horizontally relative to the pizza allowing the at least one blade and the sheet to transfer the pizza.

56. (previously presented) The apparatus of claim 55, wherein the vertical sheet includes one or more vertical slots, each slot engaging a pin extending from the plate to allow the sheet to slide vertically relative to the plate when the plate moves vertically relative to the pizza and the blades cut the pizza.

57. (previously presented) The apparatus of claim 55, wherein the at least one blade is coated with a layer of material applied by immersion, spraying on, or as a preformed sheath, the material removable at an end of a predetermined cutting cycle or given length of time.

58. (previously presented) A method for automated and mechanized preparation of pizza, the method comprising the steps of:

a. receiving a programmed order for a pizza, the order specifying topping requirements as selected from available offerings;

b. preparing an individual dough portion from flour and other component ingredients, the dough portion of volume adequate to accommodate preparation of one pizza of pre-determined dimension as received in the programmed order;

c. shaping the dough portion to a flattened pizza base;

d. metering and applying toppings to the pizza base as received in the programmed order;

e. cooking the pizza; and

f. delivering the prepared pizza.

59. (previously presented) The method of claim 58, wherein preparing the individual dough portion includes the steps of:

a. charging a mixing region with flour-like or dust-like ingredients by free fall;

b. homogenizing and aerating the flour-like or dust-like ingredients by rotating a kneading element at a relatively high speed;

c. introducing liquid ingredients to the flour-like or dust-like ingredients;

d. preparing a dough mixture by rotating the kneading element at a lower speed to form and roll together little dough clumps;

e. preparing the dough by rotating the kneading element at an even lower speed to roll out and roll thin the dough;

f. forming a single, compact, balled together dough mass by rotating the kneading element at a lowest speed; and

g. discharging the single, balled together dough mass by centrifugal force via the rotating kneading element and by gravity.

60. (previously presented) The method of claim 59, wherein charging the mixing region by free fall occurs through a charging opening in the mixing region equipped with a sliding blade.

61. (previously presented) The method of claim 59, wherein the relatively high speed is between about 2,500 and 3,000 rpm.

62. (previously presented) The method of claim 59, wherein the lower speed is between about 950 and 1,400 rpm.

63. (previously presented) The method of claim 59, wherein the little dough clumps are formed and rolled together by repeated action of rotating sleeves of the kneading element.

64. (previously presented) The method of claim 59, wherein the even lower speed is between about 850 and 920 rpm.

65. (previously presented) The method of claim 59, wherein the dough is rolled out and rolled thin by freely turning sleeves against a lower level surface of the mixing region.

66. (previously presented) The method of claim 59, wherein the lowest speed is between about 700 and 820 rpm.

67. (previously presented) The method of claim 59, wherein discharging the single, balled together dough mass occurs through a discharge opening in the in the mixing region equipped with a sliding blade.

68. (previously presented) The method of claim 59, wherein the rotational direction of the kneading element changes one or more times during various method steps.

69. (previously presented) The method of claim 58, wherein shaping the dough portion to a flattened pizza base includes the steps of:

a. pressing a dough ball into a dough disc;

b. pressing a dough disc into a pizza base; and

c. dimpling the pizza base to facilitate a uniform and expedited cooking of the pizza base.

70. (previously presented) The method of claim 69, wherein pressing a dough ball into a dough disc includes the steps of:

a. raising a lower press plate into contact with a preformer;

b. receiving a dough ball by gravity into the preformer; and

c. lowering a disc press of the preformer to form the dough disc by pressing the dough disc against the lower press plate.

71. (previously presented) The method of claim 69, wherein pressing a dough disc into a pizza base includes the steps of:

a. lowering a lower press plate away from a preformer while the lower press plate supports the dough disc;

b. horizontally moving the lower press plate to a position under an upper press plate of a dough shaping press; and

c. raising the lower press plate to form the pizza base by pressing against the upper press plate.

72. (previously presented) The method of claim 69, wherein dimpling the pizza base includes the steps of:

a. lowering a lower press plate away from an upper press plate of a dough shaping press, the lower press plate supporting the pizza base;

b. horizontally sliding a toothed punching plate to a position above the lower press plate;

c. raising the lower press plate to dimple the pizza base by pressing the pizza base against the toothed punching plate.

73. (previously presented) The method of claim 58, wherein shaping the dough portion to a flattened pizza base includes the steps of:

a. raising a lower press plate into contact with an open-bottomed housing;

b. receiving a dough ball onto the lower press plate;

c. lowering a disc press to form the dough disc by pressing the dough disc against the lower press plate;

d. lowering the lower press plate away from the housing while the lower press plate supports the dough disc;

e. horizontally moving the lower press plate to a position under an upper press plate;

f. raising the lower press plate to form the pizza base by pressing against the upper press plate;

g. lowering the lower press plate away from the upper press plate, the lower press plate supporting the pizza base;

h. horizontally sliding a toothed punching plate to a position above the lower press plate; and

i. raising the lower press plate to dimple the pizza base by pressing the pizza base against the toothed punching plate.

74. (previously presented) The method of claim 58, wherein metering and applying toppings to the pizza base includes metering and applying liquid or cream-like components, the method including the steps of:

a. positioning the pizza base for garnishing;

b. rotating a dispensing device about an axis perpendicular to the pizza base;

c. moving the dispensing device radially relative to the perpendicular axis and parallel relative to the pizza base; and

d. applying the liquid or cream-like component during steps (b) and (c), whereby the component is placed on the pizza base in a spiral.

75. (previously presented) The method of claim 74, wherein the pizza base is motionless during the application of liquid or cream-like components.

76. (previously presented) The method of claim 74, wherein the liquid or cream-like components are applied uniformly on the pizza base such that a time unit of dispensed volume of component remains constant, the uniform dispensing being achieved by altering the rotational speed of the dispensing device in relation to a changing radius of the spiral of component on the pizza base.

77. (previously presented) The method of claim 74, wherein the liquid or cream-like components are applied uniformly on the pizza base such that the rotational speed of the dispensing device remains constant and a time unit of dispensed volume of component changes in proportion to a changing radius of the spiral of component on the pizza base, wherein a reduction of the radius causes a decrease in the time unit of dispensed volume.

78. (previously presented) The method of claim 58, wherein cooking the pizza includes the steps of:

a. at least one initial heating cycle;

b. at least one intermediate heating cycle; and

c. at least one final heating cycle, wherein all cycles include use of a source of infrared rays, each cycle having a different duration, and each interval between cycles having a same or different duration.

79. (previously presented) The method of claim 78, wherein the initial heating cycle is longer than the longest intermediate heating cycle, and the final heating cycle is approximately a duration equal to the initial heating cycle.

80. (previously presented) The method of claim 78, wherein the sources of infrared rays include infrared rays in the visible, the near-infrared, and the far-infrared range, wherein a cooking effect of the sources of infrared rays in the visible and the near-infrared rays predominate during the initial heating cycle, while a cooking effect of the sources of infrared rays in the far-infrared range gradually counterbalance during subsequent heating cycles.

81. (previously presented) The method of claim 78, wherein the sources of infrared rays exist in a lower portion and in an upper portion of an oven and the sources of infrared rays in the lower portion operate during at least some portion of an interval between cycles of operation of the sources of infrared rays in the upper portion.

82. (new) A multiple station apparatus for automated preparation of a pizza, the apparatus comprising:

a. means for receiving a programmed order for a pizza, the order specifying topping requirements as selected from available offerings;

b. means for preparing an individual dough portion from flour and other component ingredients, the dough portion of volume adequate to a accommodate preparation of one pizza of pre-determined dimension as received in the programmed order;

c. means for shaping the dough portion to a flattened pizza base;

d. means for metering and applying toppings to the pizza base as received in the programmed order;

e. means for cooking the pizza; and

f. means for delivering the prepared pizza.